



YEAR BOOK
OF THE
HEATHER
SOCIETY

1978



THE HEATHER SOCIETY

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Editorial

The omission of Sir John Charrington's name from the list of officials of the Heather Society, and that of Mrs. MacLeod, though happily still retained as a Vice-President, shows that this has been quite an eventful year in the history of our Society.

By coincidence Sir John, on hearing of the pending retirement as secretary of Mrs. MacLeod, had expressed a wish to pay a small tribute to her and so this is included. Shortly after writing it he died, and Mrs. MacLeod, completely unaware of Sir John's article, requested that she be allowed to write his obituary.

When I took over as Editor in 1973/74, I relied heavily on Mrs. MacLeod's knowledge of plants and personalities in the Heather World. I am sure we all agree that "Yew Trees" has always been up to now synonymous with the Heather Society. I would like to take this opportunity of placing on record my own thanks for her assistance in answering the many letters that I sent there.

In addition, this year has seen the resignations of both Alfred Bowerman as our Chairman and Roy Turner as Treasurer. Fortunately, after many years service between them carrying out their tasks so admirably, they have both agreed to carry on as Council members so that their knowledge will still be available to the Society.

We are fortunate that the Council has been strengthened by three newly elected members, Mrs. Duvall, Mr. Culley and Mr. Julian. On your behalf I would like to wish them every success in carrying out the Society's work in the future.

I had not fully realised how much Maxwell and Beale were pioneers, until I read A. W. Jones' fascinating article. Now in a different sense we have some fifty years later Comte de La Rouchefoucauld acting as a pioneer and carrying out the Society's aim in his native France, 'to encourage, assist and foster interest in the growing of Heaths and Heathers'. We wish him every success.

I could comment on other articles, but will mention only two more. Will all members read the article, "On the Naming of Heathers", by David McClintock and then do their utmost to curb their eagerness in naming new cultivars similar to those already in cultivation. This theme is also taken up by Geoffrey Yates in his article, "New Heathers – A Plea to Members".

A.J.S.



A heather garden is ever pleasant, although it lacks the range of colour of the taller border flowers, especially the brilliant blues and yellows. Heathers are rich rather than gaudy, always peaceful, charming instead of excitable and self-effacing rather than demanding special attention.

G. E. Whitehead.

Obituary:

Sir John Charrington

In the Autumn Bulletin of 1977 we reported the death on July 16th of Sir John Charrington, just one week after his 91st birthday.

For me as the first Secretary of the Heather Society it is a matter of deep gratitude that a few months previously Mrs. Pamela Lee, who was to take over my task, had visited him at Aston Rowant. So happy had he been to see her that he phoned me the same afternoon to tell me. This was the last contact I had with him.

In equally happy circumstances her father, Roy Turner, our Treasurer for five years, had been introduced to him by me when we, together with Mrs. Turner, went to visit Sir John and Lady Charrington then at High Quarry, Crockham Hill, Kent.

Sir John, throughout the years when he lived at High Quarry, was the inspiration of all members of the Heather Society, nurserymen included, who met him, encouraging us in our efforts to give to heather gardening the place it so greatly deserved, accepting the fact that having achieved what he had set out to do, the founding of the Society, he must see it firmly established financially. Yet nothing was ever to be attributed to him personally. Everything was to be done in the name of "THE HEATHER SOCIETY", and few knew the extent of his generosity.

The last few years of his life had been saddened first by the death of his elder son Jack, destined, he had hoped to continue his task of chairman of his coal company, and then by the death of his wife, an invalid for some years. The move from Kent to Oxfordshire, largely on Lady Charrington's account to be near their second son and daughter, had hampered him from growing heathers now that he was on alkaline soil, even had his health permitted, nor was he able to take part in any of our social activities. He had, in 1971, handed over his responsibility as our chairman to Alfred Bowerman, and was happy to become our President, following the



Sir John Charrington

resignation of Fred Chapple, giving to the Society the status and high regard he had earned for it.

A Service of Thanksgiving for his life and work was held on Tuesday, November 8th in the Church of All Hallows by the Tower (the Toc H church) in the parish where he had presided at Tower House, Trinity Square, for so long, the headquarters of his company and the meeting place for all our early committee meetings.

A fine address was given at the memorial service by Sir Derek Ezra, Chairman of the National Coal Board, his associate and friend for many years. In it he outlined the outstanding services Sir John had rendered to the country and the homes of the people, drawing attention also to his contribution to horticulture, first with carnations and then with heathers.

A group of Heather Society members paid tribute by attending the Thanksgiving and our Society was honoured to be asked to provide for the service a heather arrangement which Mrs. Boxall was happy to create, embodying as a most fitting tribute to him some small plants of the *Calluna* 'Sir John Charrington'. This very lovely flower arrangement was later taken by his son to be placed on his grave, where the little *Callunas* were planted.

C. I. MacLeod

Mrs. Constance MacLeod.

by Sir John Charrington

(written June 1977)

Having become an enthusiastic grower of heathers myself, I was increasingly aware of the considerable and growing interest in the cultivation of these delightful plants, and it was in 1962 that it occurred to me that the formation of a Heather Society would be helpful.

Some preliminary feelers were put out and, as a result, a meeting was held in February 1963 in a room provided by the Royal Horticultural Society. The weather was at its worst, but some fifty stalwarts arrived, and at that meeting it was agreed by all that a Society should be formed.

The first post to be filled was the all important one of Secretary, and I approached Colonel MacLeod who was an old friend. He felt that his health would not permit his taking on the work himself, but thought his wife might like to do so. This proved to be correct, and Mrs. MacLeod was appointed.

When we met to form the Society I suspect there were several who felt we were too optimistic in believing that such a Society could last and grow. If such there were, they cannot have foreseen what Constance MacLeod's enthusiasm and devotion would achieve. To appreciate these achievements is to read the Aims and Objectives set out in the formation of the Society, and then to judge how these have been fulfilled during her fifteen years in office.

If a Society is to flourish, to the basic and essential qualities of enthusiasm and devotion, its Secretary must add efficiency, organisational ability, time and energy to expend in attending meetings and generally keeping the wheels turning both before and behind the scenes. In Constance MacLeod I believe we have had all these.

It was she, I recollect, who first suggested the issuing of the Bulletin. I was a little fearful that it might detract from the value of the Year Book, but it has certainly not done so, and the two publications complement each other admirably; indeed, members of the Heather Society can hardly complain of being begrudged information.

There could not have been a better choice of Secretary, and in saying both for myself – having in mind particularly the early years and her invaluable help to me as the then Chairman – and our members a deep and lasting thank you for all that she has done, I would also assure her of our affection and good wishes.

See photo page 36



Message from the Chairman

Maj-Gen. P. G. Turpin, Guildford, Surrey

I take over from Alfred Bowerman at a time of great change. To our deep sorrow, we have lost our President, the founder and inspiration of the Heather Society. And Constance MacLeod who, since the foundation of the Society, has been its life blood, both as Secretary and Treasurer, has retired to the less arduous office of a Vice-President. Roy Turner who, in the last few years had relieved her of the treasurership, has also handed over. Many better qualified than I have paid tribute to the tremendous contribution made by them to the Heather Society. But I must express my appreciation, and that of all members of the Society, for all that Alfred Bowerman has done during the six years that he has been our Chairman. He succeeded Sir John Charrington in 1971 when the Heather Society was rapidly expanding and when the general public was becoming increasingly aware of the great value of heathers in the garden. As a founder member of the Society, he has been personally well-known to many of our members, who have been able to appreciate his kindly and patient chairmanship and his and Margaret's generosity in welcoming members to their delightful heather garden at Champs Hill.

In spite of growing numbers, the Heather Society has retained its friendly informal character, and I hope that it will continue to combine this amateur love of heathers for what they are with the more professional approach of the nurseryman and the botanist, which is so essential, if we are to carry out successfully our responsibilities as the International Registration Authority for heathers.

I promise you that, for my part, I shall do all I can to further the aims and objects for which the Heather Society was founded.

Norwich 1977

R. and D. Radley, Stourbridge, Worcs.

This was to be our first heather conference, for although not new members it had not been convenient for us to attend before. We set off for Norwich wondering what the weekend held in store for us. Oh yes, we had received the programme, but that alone does not make or mar such gatherings – rather the people one meets and the informal conversations between the sessions and during meals.

We were thankful for the excellent directions sent to us and soon arrived at the University Hall of Residence in Fifers Lane, which was to be our base for the weekend. We were greeted by our hosts, the Norfolk Group, who gave us name labels and a much appreciated cup of tea.

After a good supper, the Conference opened with a welcome from Jack London, followed by a talk by Ken Durrant on “Norfolk Flora and Fauna”. We then gathered in the bar to make further new acquaintances.

On Saturday H. Wood, who had been Curator of a Nature Reserve in South Africa for over twenty years, talked on Cape heaths, with some good slides. The following speaker, A. W. Jones, traced the increase in popularity of heather growing and cultivars introduced via nurserymen's catalogues of the late nineteenth and early twentieth centuries. One felt there was a wealth of information still waiting to be conveyed which lack of time precluded.

After coffee came the A.G.M., but in addition to the business, it also became the occasion of a presentation to our hardworking and much beloved retiring secretary, Mrs. MacLeod. The Norfolk Group gave her a book on bookbinding and a copper tray etched with Cape heaths. But she was not the only one to have presents: to remind us of Norwich 1977 all the ladies received a pendant of polished stone from local beaches, hand-made, complete with gift box.

by H. Fulcher. All delegates were offered a thriving Cape heath by David Small.

That afternoon most of us went by coach to Adrian's Bloom's private garden at Bressingham, which consists predominantly of heathers and conifers. Whilst there the local press took photographs which appeared in Monday's edition of the Eastern Daily Press.

We are sure everyone was impressed by the garden, which is open to the public only once a year and is still expanding, and where we were thrilled to see a large and fine planting of *Calluna* 'My Dream'.

In the evening Neil Brummage amused us with his talk "Birth of a Nursery". This took us from a bare overgrown piece of land to a commercial heather nursery, through trials and tribulations that would have caused lesser men to have given up. His disasters were not confined to his nursery, as halfway through his talk the projection table collapsed; however, the lamp remained intact!

Sunday it was up with the lark, breakfast at eight and off by 9 o'clock to visit three gardens. These were Mr. London's and also that of a neighbour, Mr. Marshall, and another lovely one, that of Mr. and Mrs. Ellis at Old Catton. Back to base, and after those of us that had sneaked off to make a sly cup of coffee had been rounded up, we had photographs taken on the steps of the Hall. The rest of the morning was spent in Open Forum with David Small in the chair. This sort of discussion is always popular and we ran out of time once again before all the topics had been covered.

(Perhaps we should experiment one year with a three day conference? – Sec).

After lunch we went to Maurice Mason's forty acre new shrub garden near King's Lynn; we have Mr. Brummage to thank for arranging this visit. For many of our members this was the end of the conference and they set off home; for those staying to the Monday, Mr. Fulcher provided a slide-show in the evening. So ended a very enjoyable conference with excellent food and accommodation; perhaps we shall all meet again in Derbyshire next year.

A group photograph of Conference Members appears on page 35

A famous nursery— Maxwell and Beale

A. W. Jones, West Camel, Somerset

Few nurseries were offering heathers in 1900, but among these were James Smith of Darley Dale and Backhouse of York. In 1911, Backhouse launched the Robert Porter collection of *Erica carnea* cultivars, with a luxurious brochure to celebrate the Coronation of King George V and Queen Mary. In an article published two years after his death, in The Heather Society Year Book for 1965, D. F. Maxwell gave the honour of putting heather gardening on the map to Backhouse. However I hope to show that perhaps that honour was better deserved by his own firm, Maxwell and Beale.

I believe that the Dorset Nursery and Lavender Farm were owned by the Maxwell family. It's main business had been in growing carnations and, as its name suggests, lavender. Like many other nurseries the business had run down during the first World War.

In 1917 H. E. Beale was invalided out of the army and began to get the nursery going again. He was soon joined by D. F. Maxwell who had also served in the war. Maxwell had acquired an interest in heathers from his father, H. Maxwell, who was a partner in the London publishing firm of Sweet and Maxwell.

In 1919 they began to offer heathers. In 1920 their catalogue listed eleven cultivars among their other plants. In 1921 these had increased to nineteen including four of their own introductions. I have been unable to locate catalogues for the period 1922 to 1924, but in 1925 they issued a special Heather catalogue with coloured pictures on the front and back covers. The Heather catalogue was to exist until 1939.

That 1925 catalogue contained the statement, "We have a more complete collection of hardy heathers than any other firm in the country and have introduced a number of beautiful varieties and hybrids". It would be hard to dispute that claim since the catalogue listed

eight-three cultivars including fifteen of their own introductions. The assembling of such a large collection in so short a time bears eloquent testimony to their dedication. Even at that time few nurseries grew heathers and much diligent searching must have been needed to locate so many.

That so many cultivars could be offered for sale suggests that a great deal of work had also been devoted to propagation. In this field they performed a great service to heather growing. At that time most heathers that were offered for sale had been produced by division. The Dorset Nursery produced all its plants from cuttings.

P. S. Patrick joined the firm in 1924 and remained with them for a year. In part of an article in the 1964 Year Book he described the air of enthusiasm which existed in the nursery in those early days. That enthusiasm, which also affected others, must have been largely generated by the principals. Another employee who joined them in the 1920's was C. D. Eason.

In 1927 D. F. Maxwell's book "The Low Road" was published. This was the first book on the different sorts of heathers to be published since 1864. Throughout it he refers to the firm as the Dorset Nursery.

In 1932 the firm dropped this name in favour of Maxwell and Beale, although these names had appeared on the catalogue since 1920, below the now discarded name. It was about this time that D. F. Maxwell ceased his active involvement with the firm and the 1932 catalogue gave the directors as H. E. Beale and J. H. Hamilton.

H. E. Beale died in 1959 and the firm is now owned and run by Mr. F. J. Stevens.

So far I have given an outline of the history of the firm. Apart from describing their contribution to propagation and mentioning Maxwell's pioneering book, this has contained little to prove the thesis that I set out in my opening paragraph. In order to do this I have set out a chronological list of their introductions from 1921 to 1938 with notes where appropriate.

- 1921 *E. cinerea* 'Frances Variety', 'Pallida'; *E. tetralix* 'Ruby's Variety', 'Rufus' (This plant has probably disappeared from cultivation.)

- 1922-4 No catalogues located.
by 1925 *E. ciliaris* 'Globosa'; *E. cinerea* 'Apple Blossom'; *E. x. watsonii* 'Ciliaris Hybrida'; *E. vagans* 'Carnea'
- 1925 *E. cinerea* 'Golden Hue' HC 1971; 'Victoria'
E. x watsonii 'Dawn' Price 3/6 (At this time most plants were priced 1/-.)
E. x watsonii 'Gwen' Price 3/6.
E. x watsonii 'H. Maxwell' Price 2/-.
E. vagans 'Lyonesse' AM 1928, AGM 1969.
E. vagans 'Mrs. D. F. Maxwell' AM 1925, AGM 1969, FCC 1970; Price 7/6.
- 1926 No catalogue located.
by 1927 *Calluna vulgaris* 'Kynance: Found on the Lizard in 1923.
Calluna vulgaris 'Penhale'.
E. ciliaris 'Aurea'.
E. cinerea 'Broadstone' and 'Studland': These were "wheatear" varieties and are probably no longer available.
E. tetralix 'Pink Glow'.
E. carnea 'Cecilia M. Beale'.
E. ciliaris 'Mrs. C. H. Gill'.
- 1928 *Calluna vulgaris* 'H. E. Beale', AGM 1942, FCC 1943, progenitor of a number of fine double lings, and 'Mrs. Pat'.
- 1928 *Calluna vulgaris* 'Mullion': HC 1960, AM 1963, Found on the Lizard in 1923.
- 1929 *E. ciliaris* 'Norden': (this cultivar is discussed in the Spring Bulletin).
- 1929 *E. ciliaris* 'Stoborough' and 'Wych'.
E. cinerea 'C. D. Eason' and 'C. G. Best': FCC 1966, AGM 1969.
E. cinerea 'Domino': AM 1971.
E. cinerea 'G. Osmond': Found in 1923 or 1924.
E. x watsonii 'Rachel'.
- 1930 *E. cinerea* 'P. S. Patrick' and 'Ruby'.
- 1931 *E. x watsonii* 'F. White'.
- 1933 *Calluna vulgaris* 'County Wicklow': AM 1960, FCC 1961
E. cinerea 'Golden Drop' and 'John Eason'.
- 1934 *Calluna vulgaris* 'C. W. Nix': AM 1961.
E. cinerea 'Robert Michael': D. F. Maxwell says in "The English Heather Garden", that he has not seen this plant! He had ceased active participation in the nursery two years before.
E. cinerea 'Winifred Whitley': This has split corollas - the *f schizopetala*. It has probably been lost.
- 1935 *Calluna vulgaris* 'David Eason' and 'Mrs. J. H. Hamilton': AM 1935, and 1960, FCC 1961. This had become 'J. H. Hamilton' by the Spring of 1936; price at introduction 10/6. The catalogue states that it was found on (the non existent) Mount Maughan in Yorkshire. Recent

information originating from D. F. Maxwell's daughter suggests that it might have been found near Malton, Yorkshire.

- 1935 *E.x darleyensis* 'George Rendall': This was the first *E.x darleyensis* since the original, now 'Darley Dale', was introduced by James Smith in the late 19th century. I am told that George Rendall was C. D. Eason's father-in-law.
E. erigena 'Charlotte': This plant does not appear in subsequent catalogues.
E. erigena 'W. T. Rackliff': AM 1972.
- 1936 *Calluna vulgaris* 'Mrs. Ronald Gray': HC 1971.
Calluna vulgaris 'Tom Thumb'.
E. tetralix 'Mary Grace': (Typically has a tattered corolla).
- 1937 *Calluna vulgaris* 'Carlton': Raised by F. S. H. Ward of Malton, Yorkshire. Now known as 'Alba Carlton.'
- 1938 *Calluna vulgaris* 'Alba Plena' AM 1960; and 'Rubrifolia'.
Calluna vulgaris 'Tib': AM 1960, FCC 1962.

This list contains fifty-five cultivars introduced by Maxwell and Beale between the two World Wars. All but five of them are still available. Between them they have collected twenty-four awards from the R.H.S. In "Heaths and Heathers", published in 1971, Terry Underhill lists twenty-two of them as outstanding cultivars. Brian and Valerie Proudley describe forty-two of them in "Heathers in Colour", the criterion for inclusion in their list being that the cultivars should be those most likely to be encountered in gardens or nurseries at the time the book was written (1974). Even in the Draconian "Selected List of Heathers" in "Heather Trials" 1971-1975 nine of the seventy-five cultivars are Maxwell and Beale introductions from the period I have covered. More important than this, is the fact that some of these find their way into almost every enthusiast's collection of favourite plants and crop up in almost every discussion on heathers. Of the five that have disappeared, three, *E. cinerea* 'Broadstone', 'Studland', and 'Winifred Whitley' are still frequently mentioned in discussions as botanical curiosities.

It is a most impressive list, and we must surely acknowledge our debt to Maxwell and Beale.

In closing I must thank David McClintock for his encouragement in this work. I must also thank Joyce

Burfitt, George Osmond and Jack Platt for their patience in answering my many questions. I must accept responsibility for errors and omissions.



Heather in France

B. de la Rochefoucauld, Les Grandes Bruyères, Ingrannes, France

Heather is a familiar plant of the French countryside, but has only rarely been used in French gardens.

In the forests it covers the ground in most places. The soil is sandy and light. South of the Loire, in the Sologne, you come across beautiful scenery with carpets of moss and red *Erica cinerea* under Scots Pines. In those areas grow many varieties of *Calluna*, *Erica cinerea* and *E. tetralix*, *E. vagans* and *E. scoparia*, used for making brooms. The road banks are often covered with a mixture of *Calluna*, *E. cinerea* and *Ulex gallii*, which makes a delightful sight. Further south, the forest of Tronçais, known for its exceptionally large and fine oaks, visited by many dendrologists from all over the world, is a good heather region. Brittany, with its peaty soil, is possibly the richest heather area, very similar to Cornwall. *E. erigena* can be seen trimmed in hedges around cottages. In the Alps, *E. carnea* grows in many places. The South of France and the Mediterranean are most interesting for heather. The island of Porquerolles is a heather forest where among other species is *E. arborea* attaining 12 to 16 feet, delightfully fragrant in the spring. *E. scoparia* with its greenish flowers, grows with *E. arborea*, but is smaller.

Now, with all these lovely natural scenes, and so many local places named after heather, why does nobody use this familiar plant in gardens? I cannot answer this question.

When we started our own garden five years ago in the forest of Orléans, with hardly any knowledge at all of gardening, I went with a little cart into the woods and col-

lected some heathers. Then I planted them into my sandy soil. The reason was to do something easy, which would blend with the natural woodland and save money. The next year, I thought, we should visit heather gardens. To my great surprise, I found none. So we travelled to England and Holland, and discovered the many varieties of heathers. The first nursery we visited was Timber Lodge nursery, near Great Dixter at Northiam, one evening at 9 o'clock in July 1973. It was a lovely day and we stopped the car when driving past the entrance, where I saw heathers. Of course it was closed, but a nice lady walked out and allowed us in. She handed me the Pocket Guide of Mr. G. Yates, where I discovered the Heather Society of which I became a member, writing often to Mrs. MacLeod who helped me in so many ways. From then on started my new and increasing knowledge and love for heather.

My next acquaintance was Terry Underhill whom alas I have never met; but to whom I spoke and wrote often. He was kind enough to send over one of his students in August 1975 to show me some of his knowledge of heathers. Then I met, through Mrs. MacLeod, Mr. Zwijnenburg in Boskoop, a leading Dutch nurseryman. Most of my experience had to come from abroad, very little being available over here. But things are changing slowly. In the past two years, I have been visited by leading nurserymen and sales organisations, such as Clause, and M. Goarant; newspapers, such as "l'Ami des Jardins", publishers, such as "Rustica" and "La Maison Rustique"; and landscape architects, such as M. Loup de Viane. There is now an increasing interest from the public.

The literature on heathers in French is slender, so many people can get little help. I am at present working on a small book, with pictures, in very simple language to start providing information.

The production of heathers is also lagging. Most come from Holland, Belgium and England. In Orleans with Angers, the largest horticultural area, production does not exceed 30,000 per year with three or four varieties of *Calluna* and *E. x darleyensis*. The main production is

located in Brittany where four nurseries, to my knowledge, deal in heather and represent most of the national production: Kerisnal, Stervinou, Roué-Cadiou, and Renault. The catalogue of the leading sales organisations in this country shows 3 *Calluna*, 'Tib', 'Cuprea', 'H. E. Beale' – 5 *E. carnea*, 'Springwood'(?), 'Winter Beauty', 'Aurea', 'Ruby Glow', 'Vivelli – 4' x *darleyensis*, 'Darley Dale', 'Furzey', 'Ghost Hills', 'Arthur Johnson' 2 *E. vagans*, 'Mrs. D. F. Maxwell', 'St. Keverne'. The nurseries in Brittany offer about 40 varieties, sometimes of undetermined origin.

This is the situation in France: a lovely countryside for heather, a slowly, but steadily, growing interest in the public for heather gardening which should be supported by more information, a new professional market.

I would be happy to greet over here any member of our Society travelling to France and show them around my gardens, where I grow today over 300 sorts of heath and heather.

*M. Goarant circulated last summer a small type-written booklet: "Les Bruyeres de Plein air", which is reviewed on page 53.



Heather Gardens

Fritz Kircher, Hamburg

(We are grateful to the newly formed Gesellschaft der Heidefreunde for permission to reproduce, in translation, the following article. It appeared in the first number of their publication "Der Heidegarten", and was written by the able Superintendent of the heather garden at the hospital at Heidberg in Hamburg. He was one of the prime movers in getting the German Society founded and is one of the five members of its Committee of Management ED.)

At one time or another, Man started collecting, and putting near his dwellings, the most beautiful wild plants from woods and fields, from marshes and moors. Gardens then appeared, to give greater happiness, taste and motives changing from century to century.

Today, gardens and grounds usually have lawns. This sort of layout was an English idea, and Englishmen are known to be great gardeners. They also translated the thought into the deed and planted heathers in gardens. As they walked across the moors, English nature lovers discovered that among heathers, and in particular Ling, there were many different forms. To maintain these special forms, they propagated them vegetatively and their beauty then gave pleasure to other gardeners.

Those who take the trouble to look closely at wild heathers, find that there are many variations in habit, in the colour of the leaves and flowers and in flowering time, especially in *Calluna*, even if none are of importance. But if the searcher is lucky, he will find a new form worthy of being brought into cultivation.

The first heather gardens were laid out in England at the turn of the century. In Germany they were started only in the 20's. It was the Director-General of the landscaping department of the firm of Späth in Berlin, Carl Kempkes, who first made extensive heather gardens at Prellwitz in Mecklenburg and in Dorn. After 1945, a model heather terrain, ranging from the driest sandhills to heathery pools, was planted in the rock garden at Herrenhausen in Hannover by Prof. Meyer, with a rich collection of *Callunas* and *Ericas* including many new varieties. Today there are many small and larger heather gardens, for example in the Botanic garden at Bremen, the Callunetum of Herr Harten at Lutterloh/Sudheide with all forms of *Calluna*, and the heather park in the hospital of Heidberg in Hamburg, which now has more than 300 varieties of heaths and heathers.

Heather gardens have appealed to ever more people in the last few decades. Many new varieties have been found, especially in England. The list of heathers gets ever longer, and heather gardens ever more beautiful. There are almost always some heathers in flower: even in November the late varieties of *Calluna* and of *Erica ciliaris* are flowering and by December *E. carnea* and *E. x darleyensis* have started.

The growth of heather gardening in England resulted in 1963 in enthusiasts forming the Heather Society. By

1970 it already had over 700 members. In 1971 the Dutch Society, Ericultura, was founded and grew even faster. It now has more than 900 members. It was only a question of time before heather growers in Germany organised themselves similarly. On 4 June 1977 they founded in Hamburg the "Gesellschaft der Heidefreunde." Its aim is to help, by shows, meetings and the like, all those who are keen on heathers and wish to make a heather garden themselves.

(Its address is:- Tangstedter Landstr, 276. 2000 Hamburg 62; Subscription DM 20.00 Ed).



Never a dull moment

P. L. Joyner, Totton, Southampton

Nine years ago the word 'gardening' was not part of my vocabulary and 'heather' was a plant that grew on the heaths of my local New Forest and formed a pink carpet during late summer.

It was then that I married and in order to keep my small garden tidy I turned to gardening. In those days it meant an aching back and the possibility of a little colour from a free packet of annual seeds spread around during late spring. My greatest successes were radishes and dahlias, my dismal failures were lawns and tomatoes.

1970 saw the acquisition of a new house with a small enclosed garden and by then I had begun to show an interest in not just keeping things tidy, but in trying to produce colourful borders by using bedding plants. At about that time a friend gave me a few plants of a low growing shrub which flowered during the winter; marvellous I thought, what accommodating plants and so pretty too. My friend said they were *Erica carnea* and were heathers. Heathers I thought, surely not. I hadn't seen any heathers flowering in the New Forest during the winter.

My interest in gardening began to blossom just like the carneas and so in an effort to extend my new found interest I decided to join a garden book club. In 1971

I received a book titled "Heaths and Heather", by Terry Underhill and this furthered my interest in these fascinating plants. With this further stimulus I planted my first heather bed containing single plants of *E. carnea* 'Springwood White', 'Atrorubra' and 'King George' together with *E. cinerea* 'Eden Valley' and 'Atrosanguinea'. The following autumn I planted a border of heathers along the edge of the lawn, concentrating on single specimens with the emphasis on foliage cultivars.

"Heaths and Heathers" was being consulted more and more and I was increasingly fascinated by the thought of Cape heaths. I now had a small greenhouse and so decided to extend my cultivation to include these as well. At Christmas in 1972 I purchased some very colourful heath-like pot plants and, now being a member of the Heather Society, I sent a few small pieces to Mrs. MacLeod for identification. These turned out to be *E. x hyemalis*. From then on I obtained various Cape Heaths from contacts made via Mrs. MacLeod and the Society's publications. Mr. J. R. Allan of Guernsey and Mr. K. A. H. Cassels of Scotland kindly supplied me with *E. canaliculata* and *E. caffra* respectively and a kind invitation to a Cape heath party at Mrs. R. Gray's house added further plants to the collection.

I had started propagating from my collection of *Ericas* and *Callunas*, having most success with *E. x darleyensis* 'Silberschmelze' and *E. carnea* 'White Glow'. My success with the summer flowering kinds were restricted to *C. vulgaris* 'Serlei Aurea'. The Cape heath cultivars were impossible to propagate at that time.

Notable cultivars were *E. carnea* 'Pink Spangles' *E. vagans* 'Mrs. D. F. Maxwell' and *C. vulgaris* 'Robert Chapman'. *E. canaliculata* dominated the greenhouse displays during the winter with its small white flowers borne in great profusion and *E. glandulosa* kept on producing its curved tubular flowers through all the seasons, even when stood outside during the summer. The Cape heaths seemed to relish the fresh air, especially during the winter when slight frosting did not seem to harm them.

Early this year (1977), I moved to a bungalow with a larger garden and I have begun to plant my heaths and heathers in groups of three. The single plantings had been a success in the smaller garden but now I took advantage of the increased area. My Cape heath collection has grown to twenty species, mainly thanks to David Small who has provided me with some superb material and, in addition, valuable information on propagation which has given me more success with Cape heath cuttings.

My conclusion at this stage is that heather growing provides me with an absorbing hobby, the results of which can be clearly seen, and there is never a dull moment.



Heathers in the Commonwealth War Cemeteries

W. F. W. Harding, Goring, Oxon

Heathers have never been grown very extensively by the Commonwealth War Graves Commission in the 1914-18 War cemeteries in Northern France and Belgium because in general the soils are not natural 'heather soils'. When however we took over the 1939-45 cemeteries on the sandy acid soils of Eastern Belgium and Southern Holland it was immediately clear that conditions there were ideal for the extensive use of these decorative and labour-saving plants and this opportunity was rapidly exploited.

Though heathers have been used in large number in many cemeteries, the greatest opportunity occurred in Holten Canadian War Cemetery in Holland where there was a large vacant area between the road and the grave plots which it was desired to retain. The Commission's Principal Architect, Mr. Philip Hepworth, accordingly produced an overall plan for the architecture and the landscaping, which made provision for a $1\frac{3}{4}$ acre Heather Garden to occupy this area and this feature has proved a great success over the years.

A basic stock of about 30 species and cultivars was bought in from a Dutch nursery and from this stock about 50,000 plants were propagated for the initial planting. The ground was contoured slightly to give added interest and the effect enhanced still further by placing some taller subjects on the higher positions, such planting being of species that would readily tone in with the plantings of heathers. *Rhododendrons*, *Rosa rugosa*, *Cornus florida* and *Ckousa*, *Pinus mugo*, *Berberis wilsoniae*, *Cotoneaster adpressus* var *praecox* and *Erica arborea* 'Alpina' were amongst such subjects.

The following are some of the heathers which have over the years proved most decorative and rewarding.

Calluna vulgaris 'Alportii', 'Aurea', 'H E Beale', 'Cuprea', 'Hammondii', 'Mullion', 'Praecox Alba', 'Serlei', 'Serlei Aurea'; *Erica cinerea* 'C. D. Eason', 'Rosabella'; *Erica vagans* 'Lyonesse', 'Mrs' D. F. Maxwell', 'St. Keverne'; *Erica carnea* 'Springwood White', 'King George', 'Winter Beauty'; *Erica x darleyensis* 'Darley Dale'.

'H. E. Beale' has perhaps proved rather less permanent than many of the other cultivars, but its effect has been so superb when planted in mass that we have been unable to spare it and so have always kept replacement stocks under propagation. 'Mullion' is a very compact low variety which we value highly for planting in front of the headstones.

The appeal of this fine heather garden to the Dutch and other visitors has been so great that it is not unusual during all the finer months of the year to see a dozen large tourist buses drawn up outside the cemetery at a time. The Commission's British Head Gardener 'Charlie' Reeves, assisted by his two Dutch gardeners, takes immense pride in this heather garden and maintains it at a superb standard. Plants which die from natural causes or which have passed their optimum, are promptly replaced, as in the little nursery plot there are always about 40,000 heather under propagation for this and other cemeteries.

Heathers are also planted in large quantities in other War Cemeteries in Holland, such as at Arnhem Ooster-

beek, Jonkerbos in Nijmegen, Overloon and Mierlo, whilst in Germany they feature largely in the planting in Reichswald Forest. In Belgium there are at Adegem Canadian War Cemetery two fine long beds planted solid with 'Mrs. D. F. Maxwell'.

In the cemeteries with alkaline or neutral soils, *Erica x darleyensis* 'Darley Dale' has been our great stand-by. Where one has the chance to let this cultivar attain its full natural proportions it is possible to get a bush 3 feet high and as much across completely covered with bloom. Naturally the *E. carnea* varieties have also proved their worth under such conditions.

In England, the Commission has substantial heather plantings in two of the cemeteries it maintains, Brookwood Military Cemetery in Surrey and Cannock Chase British and German Cemeteries in Staffordshire. In Brookwood the time has arrived when many of the plantings made about 20 or 30 years ago are coming up for replacement, so that different plots now vary in their effectiveness, but nevertheless there are in season some very fine old plantings of the *Erica vagans* varieties to be seen, particularly 'Lyonesse', 'St Keverne', 'Mrs. D. F. Maxwell' and 'Pallida'.

In the German Cemetery at Cannock Chase there is perhaps rather less technical interest for the heather lover since all the full length beds over the graves are planted with the wild *Calluna vulgaris*, though this was in fact originally procured from elsewhere than the Chase. In the surrounding shrub borders there are small quantities of choicer varieties, but not to the same extent as at Brookwood. In these two cemeteries the heathers are sprayed every spring with Gamma HCH against the Heather Beetle, *Lochmaea suturalis*, which is rife on the Chase and liable to ruin any floral effect.

Currently there can be no doubt that our most interesting heather garden is at Holten, lying about 12 miles east of the town of Deventer and quite close to the German frontier. This is a planting to which I would encourage any heather lover, when travelling on the continent, to make a deviation and I am sure he would not be disappointed.

On the other hand if the business of any member of the Heather Society should take him or her to the other side of the world to Japan, the Commission also has fine heather plantings to show in Yokohama War Cemetery, where Len Harrop, the Commission's dedicated supervisor, has made extensive informal plantings of heathers, the basic stocks for which were sent out to him from this country.

(Mr. W. F. W. Harding OBE, BSC (Hort), FLS is the Director of Horticulture for the Commonwealth War Graves Commission, and has recently been awarded the gold Veitch Memorial Medal by the R.H.S. ED).



On the naming of Heathers

David McClintock, Platt, Kent.

I have been asked to try to clarify the business of how heathers get named. Since the prime interest of our members is in garden varieties, cultivars, I shall confine my discussion to these. (The Rules for Botanical Nomenclature are referred to in our "Guide to the Naming of Plants", eg in Q and A 19).

The first point is to resist the urge to bestow a name on every gosling, imagining it to be a cygnet. By all means keep attractive forms you have found or propagated, which, of course, like our own children, have a special charm. But, before thinking of publicising a name, let alone of launching it on the market, please make certain you have compared the plant really critically with similar cultivars, and get others to give their candid, and perhaps more experienced, opinions too.

This is not to say your treasure may not have hidden merits. Every seedling is the result of a different genetic combination, and so will differ from its parents, if usually imperceptibly or unimportantly; and sports too have a slightly different genetic basis from the plant on which they originated. Whether the difference is indeed important, must be a matter of opinion. Are greater height or earlier flowering enough? Greater vigour or robustness may be, and so may improved resistance to

disease and suitability to a variety of climates. Useful though the comprehensive trials at Harlow Car were, perhaps even more useful are trials by members, or others, all over our islands, and abroad, of identical clones of similar cultivars, to discover which are best in which conditions, and which are good anywhere.

Personally, I try to let every seedling show its face before pulling it up. Not only for me have the rewards of this been good – eg two ‘Bicolor’-like *Daboecias*, a schizopetalous *E. cinerea*, and some fine *E. vagans* and *E. cinerea* and foliage Callunas. I doubt if any of these justifies a name, but I would not be without them; and some time I intend a bed just for my own seedlings.

There is no way of preventing anyone from giving a name to a plant, except moral disapproval; and who is to judge when a plant does merit it? But undoubtedly far too many names are given every year without the raiser having fully checked if it is justified. The principle must be to take time, plenty of time, before christening new heathers. What sometimes happens is that friends take a liking to a seedling, or propagated sport and beg cuttings. A name is then produced to identify it. Later the plant may take the fancy of a nurseryman and, hey presto!, the name is in a catalogue, sometimes unbeknown to the original owner. He, meanwhile, may have thought of a better name, which he uses, with the result that the same plant is being grown under two different names. So, do resist the temptation to alter a name: it helps to have told the Registrar of any such name, even if unpublished.

This potential source of confusion and proliferation can be avoided, when a provisional name is required, by using at first a code, and obviously not a cultivar name, and certainly not to be regarded as such. Gen. Turpin calls his seedlings TS1, 2 and so on, and his cuttings TC1, 2 and so on.

How to name cultivars

The naming of cultivars is, strictly, controlled by the International Code of Nomenclature for Cultivated Plants. Its articles setting out what names are admissible, how they should be published and so on, are summarised

in our Guide, Q and A 32 onwards. Its article 24 stipulates that a name is validly published only by distribution to the public of dated, printed or similarly duplicated, matter, copies of which should be sent to the International Registration Authority. But, so far, after over seven years, this International Registration Authority has received not one such document, which has not made his task easier.

In theory any name not published thus is invalid; but in practice what has gained currency illegitimately has to be taken account of, notably names in undated catalogues – will nurseryman PLEASE put the date on theirs? Nevertheless it is most desirable that we all publish names only in accordance with the Code.

Frankly, few sanctions exist against those who do not also register their names. They are still urged to, not only to ensure that they have not chosen one already in use or otherwise not available. The International Registration Authorities (and there are over 60 of them) have a useful role and should be supported – see the article on page 3 of our Bulletin for Spring 1972, which supplements that on page 15 of the 1970 Year Book.

Lists of names

One of the duties of an International Registration Authority is to publish a list of the names of its group of plants, and to keep it up to date. Although the records, which are available on request, have existed since before 1970 on which to base such a list for heathers, the actual production of it is more than can be undertaken at present. But a start has been made on this duty. The "Pocket Guide to Heather Gardening" appears in its third edition in 1978. In it Mr. G. Yates briefly describes those heathers known to be available commercially in Europe – currently not far short of 700. To this has been added a list of all the other known names of heathers. These include others in use since the last war, mostly those plants grown privately, which have not reached the trade, and those grown outside Europe, some 270 of them; older names not heard of or identified in use for many years, of which over 200 have been noted; names used for botanical variants, also over 200 strong;

and errors and synonyms, of which no doubt there are more than the 270 listed. In all, in the two lists, about 1650 names are accounted for; and people will be able to see at once what names are not available for new plants. More work is needed, especially among the botanical variants, but here is a chance for comments of all sorts, please.

Summary

1. When you have a good seedling or sport, from the wild or your own garden, look at it very dispassionately before dowering it with more than a code name, or putting it into the trade.

2. If it really does warrant a useable name, first check with the Registrar that the name is available and permissible; and ensure that this name is adhered to and not changed.

3. Always, promptly, tell the Registrar of any name you coin or hear of.

4. When it is justified to publish the name, do so in accordance with the Horticultural Code, in e.g. a dated catalogue or horticultural journal such as one of our Bulletins or Year Books, together with an adequate description etc.

5. Registration should follow. Application forms are available from me for the fee of £1. One completed copy will be returned duly counter-signed, with the actual Certificate of Registration (see photo p 30).

Several important pairs of member's eyes have helped by reading the draft of this article, but I am particularly grateful to Mr. C. D. Brickell, the Director of Wisley, for his comments.



New Heathers — A plea to members

G. Yates, Arnold, Nottingham.

I have just completed the revision of the "Pocket Guide to Heather Gardening", and the problems in obtaining information have once more come to the fore. This time the problem has been greater than ever before because

This is to certify that

.....
Erica cinerea 'Novar'.....

has today been registered with the International Heather Registration

Authority by Mr. W. A. Cadman, Woodside Nursery, Black Park,.....

Inverness. IV3 6PW. Scotland.

Its characteristics at the time of registration are noted overleaf.

.....
David McChintock

Date .29. August. 1976

for Heather Society

International Registration Authority

in the last four four years there has been an enormous flood of new names, and so few members seem to realise that information on new names is absolutely vital to the Heather Society as International Registration Authority I do appeal to all members to send information to either Mr. David McClintock or me, and I will pass it on, if they either name a plant, or come across a name which is new to them.

Over the years in writing, and subsequently revising, the "Pocket Guide", I have written hundreds of letters, in many cases sent stamped addressed envelopes, and replies are comparatively rare. Some form of control over the flood of new names is essential both in promoting the popularity of the plants we love, and also enhancing the prestige of our Society, as the multiplicity of plants to choose from, so many of them being so much alike, is in danger of bringing our favourite plants into disrepute.

It may surprise many to know that there is little or no commercial value in new heathers, and the most prosperous nurseryman is the one who concentrates on growing 25 to 30 cultivars. Fortunately many nurserymen are also enthusiasts and they are happy to grow large numbers of cultivars to compare them, and offer them to enthusiastic collectors. There is no merit in secrecy, and the best way to promote interest is to publicise a new plant, send plants to the Society for the trials and by the time plants have been propagated for sale, a demand will already have been created.

Surprising as it may seem amongst the members of the Society, there are a few who are wonderfully helpful and cooperative, but equally there are those members who never pass on information unless it is virtually dragged out of them. My plea is that every single member should make it his or her duty to keep the Society informed of new plants raised by them, and new names that they come into contact with. The new "Pocket Guide" should be available by the time this is published, and the names in that represent the full record of all plants recorded by the Society up to the time of going to press.

Phytophthora Cinnamomi

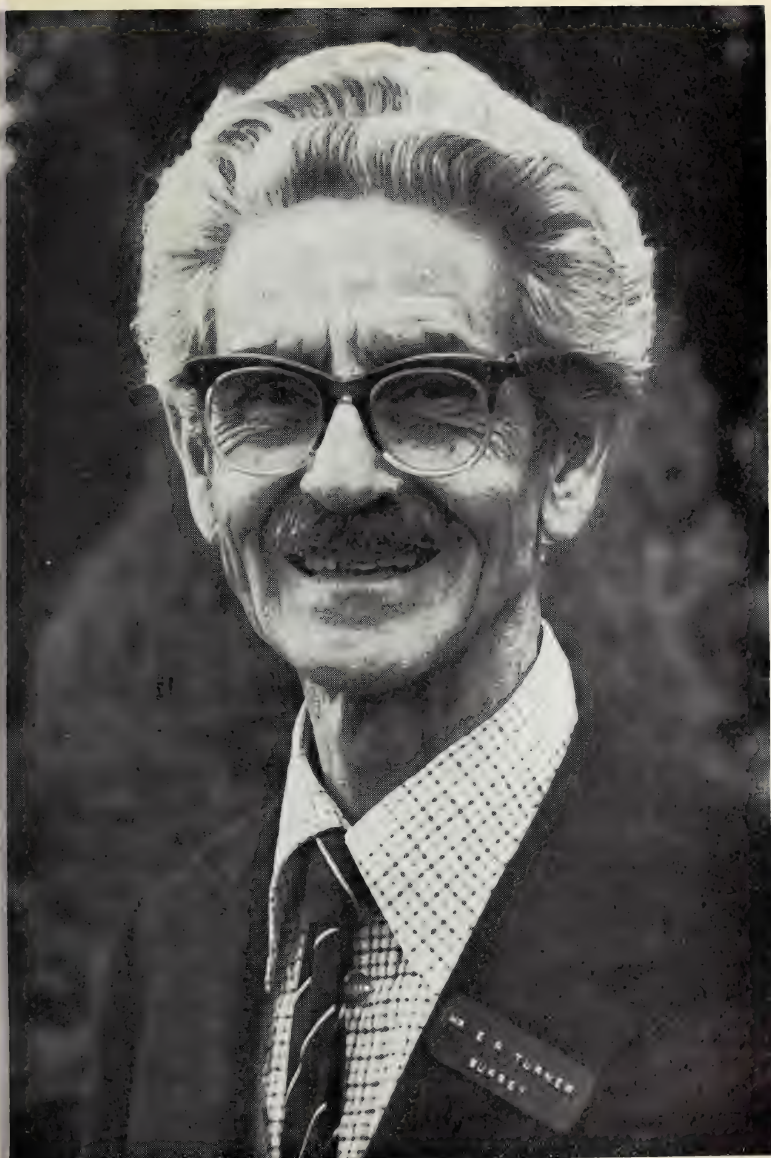
Introductory note by Brigadier C. E. Lucas Phillips,

Members will recall that only in our last Year Book, Dr. W. A. Small, of Middlesborough wrote on the subject. His namesake, Mr. David Small, of Ipswich, in a letter to me, says that many nurseries treat their plants with the fungicide, etridiazole, which merely camouflages the disease, and Miss Audrey Brooks, the R.H.S. pathologist writes similarly. One hopes that such treatments are done out of ignorance and not with unethical intent.

When the Mid Southern Group of The Heather Society visited my garden in August 1977, I called their attention to a few plants that were looking "thoroughly browned-off". There were three in a group of ten *E. vagans* 'Valerie Proudley', three more in a dozen of *Calluna vulgaris* 'Peter Sparkes' and one among some *E. cinerea* 'Pygmaea', We all asked ourselves, "Why do heathers so often die for no apparent reason?"

On the advice of Miss Brooks I sent some specimens to Dr. Pauline Smith, Microbiologist of the Glasshouse Crops Research Institute, who is doing a special project on heather diseases. She identified my trouble as the fungus *Phytophthora cinnamomi* and wrote to me a most interesting letter. As a result, I asked her if, for the benefit of us all and gardeners generally, she would be good enough to write an article for our Year Book and this she has kindly agreed to do.

I have myself experimented with products called Macuprax and Mancozeb and can say that the disease has not spread in the beds where these have been used, but of course, this in itself is far from positive evidence. At Kew the soil is sterilised by steam, but such a treatment is beyond the reach of most of us.



Mr. E. R. Turner, our Former Treasurer, at Norwich 1977 Photo: F. B. Rice



Norwich 1977. David McClintock with Ian and David Small and Mrs. Ellis in her garden examining *Calluna* 'Rosalind'.

Photo: F. B. Rice



Adrian Bloom (left) with Conference Members in his garden, at Bressingham, Norfolk, 1977

Photo: F. B. Rice



Mrs. Constance MacLeod Norwich 1977

Photo: F. B. Rice

Die-back and wilt disease caused by *Phytophthora cinnamomi*

Pauline M. Smith, Glasshouse Crops Research Institute, Littlehampton, Sussex BN16 3PU

Die-back and wilt disease of heaths and heathers caused by the fungus *Phytophthora cinnamomi* was reported in the U.K. in 1937. It is, therefore, not a new problem, but in recent years has probably become more prevalent, and certainly more widely recognised, as techniques for isolating and identifying the fungus have improved. The Agricultural Development and Advisory Service (ADAS) undertakes the diagnosis of *Phytophthora* diseases for the nursery stock industry. But, non-commercial growers are faced with the dilemma of deciding whether plants with shoot wilt, browning and/or die-back are suffering from adverse growing conditions, *Phytophthora* infection or some other disease or pest attack.

The fungus and mode of attack

P. cinnamomi is a soil and water borne pathogen and usually infects its host via the roots, although infection of stems which are in contact with infested soil can occur. The rate at which root rot develops and spreads into the stem depends on host susceptibility and environmental factors e.g. soil moisture and temperature as well as the amount of fungal inoculum present. The optimum temperature for vegetative growth (mycelium) of the fungus is about 27°C (81°F) and no growth occurs below 5°C (41°F). The disease is, therefore, more prevalent during the warmer months of the year. The fungus can produce three types of spores – (1) *Sporangia*. These are formed in the presence of water and can either germinate directly to produce a new colony, or liberate 20 to 30 motile zoospores which swim or are carried in water and thus come into contact with plant roots. Zoospores soon become non-motile and germinate

to produce a vegetative growth which penetrates and infects the host roots. (2) *Chlamydospores*. These are non motile, with a slightly thickened wall and probably serve as short-term survival spores which germinate eventually to give further fungal colonies. (3) *Oospores*. These are also non-motile but have a thick wall and may survive in the soil for some years. We do not know the conditions which induce germination of spores or how important they are in contributing to the spread of die-back and wilt disease.

Disease symptoms and host susceptibility

Root infection by *P. cinnamomi* usually goes undetected until the amount of rotting reduces water uptake to such an extent that there is foliar wilting, yellowing, browning and desiccation. Thus, although wet conditions encourage infection by *P. cinnamomi*, disease symptoms are likely to develop more quickly during periods of dry weather when the plant is under greater water stress. In some host plants the fungal infection spreads so slowly in the roots that the production of new roots can offset the damage. In these hosts the typical foliage symptoms may be long delayed or never develop, while in others vigour may be reduced. However, these 'symptomless' but infected plants can be an important undetected source of disease spread.

P. cinnamomi attacks not only Ericaceous plants such as *Erica*, *Calluna*, *Rhododendron*, and *Pernettya*, but many coniferous species including the numerous varieties of *Chamaecyparis lawsoniana* which are frequently planted in heather gardens. *P. cinnamomi* is a world wide pathogen attacking over 900 plant species belonging to more than a hundred different genera.

Disease control

At the Glasshouse Crops Research Institute we are testing different methods of disease control including the use of fungicides. Several new fungicides have given a promising level of control when applied to plants as protectant drenches to the roots, but further work is necessary to determine whether the treatments will give long term protection and to confirm that the fungicides

are non damaging to a wide range of plants species. It should be mentioned that fungicides of the MBC type e.g. Benlate are unlikely to give control of *P. cinnamomi*; these compounds although effective against many fungal pathogens, are known to be inactive against *Phytophthora* species. Until effective fungicides for the control of *P. cinnamomi* are available for the home gardener, prevention of disease spread by adopting the following measures is the only line of defence.

1. Do not plant in soils which are liable to become waterlogged or overwet. Encourage vigorous root growth by good cultural conditions.
2. Regard any heather plant with wilt or die-back as a 'suspect' victim of *P. cinnamomi* attack. Remove the plants with the roots and adhering soil to a polythene bag at the site. Remember that any spillage of infected root fragments or soil or transference on tools and footwear is liable to spread the disease.
3. Contaminated material can be 'sterilized' by drenching with formaldehyde* or burning. Tools should be washed with a disinfectant such as SterIzal. But, at all costs, avoid dumping diseased material where drainage water might carry the fungus to other parts of the garden.
4. When selecting cuttings for propagation take shoots from vigorous plants and avoid those near or in contact with the soil.
5. Always buy stock from a reliable source.
6. Use a clean water supply for irrigation.

Finally, although protectant fungicide treatments may be on the way, there is no substitute for good growing conditions and careful removal of ailing plants.

*Formaldehyde can be used on fallow land or compost, but sufficient time must elapse to allow the toxic fumes to disappear before planting (3 weeks on light soils and 6 weeks on heavy soils). Formaldehyde is a poison and the instructions for use must be strictly observed.

New Introductions

J. Platt, Ulmes Walton, Nr. Leyland, Lancs.

(Our avid collector has again been busy this year and he has listed details of his latest acquisitions. ED.)

Calluna vulgaris

'Amanda Wain' - July-Oct.

Rose pink flowers, upright growth, orange foliage. Agent-Woolworths.

'Battle of Arnhem' - Nov.-Dec.

24". Purple-red flowers, dark green foliage turning bronze in winter, similar in growth to 'Autumn Glow'. Found by Dr. I. T. Visser, Wageningen, Holland.

'Catherine' - Sept.-Nov.

9"-12". Cerise flowers, upright twisted growth, grey-green foliage. Raised by Mr. C. T. Harding, Old Hall Nurseries, Puddington, Cheshire, 1973-1974 and named after his daughter.

'Crimson Sunset' - Aug.-Oct.

6". Purple-red flowers, spreading growth, yellow-orange foliage turning bronze in winter. A neat plant.

'Dart's Gold' - Aug.-Sept.

6". Single white flowers (sparse). A sport from 'Ruth Sparkes', compact, lower growing than its parent plant. Showing only one spike reverting, (half yellow, half green) after three years. Darthuizer Nurseries, Leersum, Holland.

'Dart's Silver Rocket' - July-Aug.

18". Mauve-purple flowers, upright growth, grey foliage. Fast growing plant. Darthuizer Nurseries.

'Eric Easton' - Sept.-Oct.

12". White flowers, spreading growth, unusual green foliage. Mr. H. Mitchell, Yorkshire.

'Golden Max' - July-Aug.

18". White flowers, upright growth, foliage clear yellow throughout the year. Mr. J. B. A. Dekker, Mijdrecht, Holland.

'Herbert Mitchell' - Aug.-Sept.

12-18". White flowers, upright growth, very free flowering. Raised by Mr. H. Mitchell.

'Jan Dekker' - Aug.-Sept.

6". Clear purple-grey foliage. A nice plant, compact spreading growth. Mr. Dekker.

'Oxabach Carpet' - Sept.-Oct.

2". Purple flowers, flat creeping growth, dark green foliage. Found growing on Oxabach mountain in Sweden by Mr. J. Åge Lundell of Helsingborg.

'Pink Gown' - Sept.-Oct.

24". Pink flowers. A sport from 'White Gown'. Sometimes throws the odd white flowering spike. Mr. H. Mitchell.

'Red Max' - July-Aug.

14". Purple flowers. Upright growth, vigorous. Foliage turning bronze red in winter. Mr. Dekker.

'Sedlanov' -No flowers.

A minute cultivar. A ball of moss-like foliage at three years. 1-1½" spread. Is this the smallest heather in cultivation?
Dr. Lead from J. Grulich, Czechoslovakia.

'Sylvic' -Sept.

9". White flowers (Sparse). Spreading dwarf growth. Mr. H. Mitchell.

'Silver Sandra' -Aug.-Sept.

9". Silver white flowers, bushy growth. Dr. Visser.

Erica carnea.

'Pink Cecilia M. Beale' -Jan.-Mar.

Light pink flowers, spreading growth. A sport found by the late Fred Chapple on the white flowering plant. Mr. P. J. Foley, Little Heath Farm Nursery, Berkhamstead, Herts.

'Wanda' -Jan.-Mar.

6-9". Mid-pink flowers. New growth in spring tipped pink. Pennyacre.

Erica cinerea

'Baylays Variety' -July-Sept.

3". Purple flowers. Very compact slow growing, forms a dome shaped plant. My smallest *cinerea*. Mr. T. C. Thacker, Knowle, Warwick.

'Dr. Small's Seedling' -July-Sept.

4". White flowers, rich dark green foliage, spreading growth. Distinct. A very nice plant found in Galway. Dr. W. A. Small, Middlesborough.

Daboecia x scotica

'Silverwells' -June-Oct.

White flowers, low growth, very floriferous. A very good plant. Edrom Nurseries, Coldringham, Berwickshire.

Erica erigena

'Ewan Jones' -April-May.

24". Pink flowers (red in bud). Foliage lime green in summer, turning yellow in winter. A striking colour break. A seedling from 'Superba'. Raised by Mr. A. W. Jones of West Camel in 1973.

'Golden Lady' -Mar.-April.

White flowers, sparse. The only gold foliage *erigena* in cultivation. Bressingham Gardens, Norfolk.
('Golden Dome' (Letts 1964) reverted).

Erica tetralix

'Terschelling' -July-Sep.

6-9". Mauve-rose flowers in racemes (not umbels). Upright grower. Found by Mr. Zwijnenburg on Terschelling Island, Holland.

'Shetland Island' -July-Oct.

Light pink flowers, grey green foliage. Obtained from Head Gardener of Withnell Hospital, Blackburn.

Further notes on the induced Erica erigena x Erica carnea hybrids

Mrs. Anne Parris, Usk, Gwent.

Notes on this cross have appeared in both the 1976 and 1977 year books.

The three plants having 'W. T. Rackliff' as the female parent have now all flowered. Flower colour varies slightly between the three, but I would think that all are pinker than the more mauve 'Darley Dale', whilst resembling this plant in habit, and in not setting seed.

Mr Lionel Woolner, Devon, sent me specimen flowers from a presumed natural hybrid seedling occurring near his 'W. T. Rackliff', which he strongly suspects of having a 'W. T. Rackliff' x 'Springwood Pink' parentage like my induced hybrids. His colour was very similar, but the florets larger; due I suspect to better cultivation than my plants, which are cramped.

It would be interesting to know how many others of the Society have had natural seedlings near 'W. T. Rackliff' which are suspected of being hybrids of *E. erigena* x *E. carnea*.

In this connection I would like to know if anyone has succeeded in obtaining seed and seedlings from 'W. T. Rackliff'. I have not done so myself. If this is true that the plant is sterile, the fact of having induced hybrid fertility suggests the plant is only *male sterile*. Also if true, this renders the obtaining of further crosses using *E. carnea* as the male parent, much simpler.

The *Erica erigena* 'Brightness' x *E. carnea* 'Springwood Pink' induced hybrids are much slower to flower. Of the four plants obtained one only shows flower buds for 1978. The four plants all have the bright pink to crimson young shoots which one associates with the hybrid. 'J. W. Porter'. However in this case the 'Brightness' parent is certainly not male sterile. I have a number of plants obtained from seed from this parent.

My plants of 'Springwood Pink' do not breed true. Seed from this source produces a variety of colours and types, varying from white to bright pink and mauve, most of which resemble the parent in prostrate habit, but some of which are more shrubby and erect.

I am grateful to Mr. McClintock for coming to see these hybrid plants. His interest is encouraging. He has a full set of them and is growing them alongside a collection of the other cultivars.



After the Drought

Mrs. D. Maginess, Broadstone, Dorset

The great drought of 1976 left large patches of apparently dead heathers on a bank surrounding our lawn. The following spring and summer, these plants were deliberately left untouched, to see if any life existed in the roots, and replacement was postponed as another hot dry summer might well have killed young plants.

During October, all the obviously dead plants were removed, and burnt. Sorrel, which had taken over most bare patches, had to be carefully forked out and by the end of the month all was ready for replanting.

We had a quantity of well-rotted compost formed from weeds, and it was found that even couch grass had succumbed to the action of a rotting compound. It was interesting to note that underneath the dead heathers a good compost had been formed from their decayed leaves, probably the result of years of natural leaf fall.

Attention was first given to large clods of heather having long branches, bare, except for the tips. These plants were lifted and replanted in holes deep enough to ensure that only the green tips would show above ground when earth and compost was packed round them. It is expected that the tips will root as layerings and make good coverage in a couple of years time. Those treated in this way were *E.carnea* 'Springwood Pink' 'Springwood White', 'Rubra' and 'Winter Beauty', *E.cinerea* 'Eden valley', *E.vagans* 'Mrs D. F. Maxwell'

E x williamsii 'P. D. Williams', *Calluna vulgaris* 'H. E. Beale'.

Fortunately, two years earlier self-layerings of summer and winter flowering heathers had been potted up. Cuttings had been taken in January 1975 of *Calluna* 'Golden Feather', and kept out of doors in pots, covered with inverted jam jars, whose necks fitted just inside the rims of the pots. Though they took some months to root, they soon became strong, healthy plants, and the success rate was some 80%.

Surprisingly, the only varieties totally lost on the bank, were *E. carnea* 'Aurea' and 'Pink Beauty' and *Calluna* 'Cuprea'. Even a *C. vulgaris* 'Mrs. Pat' survived, having been sheltered by the overarching branches of *E x williamsii* 'P. D. Williams'.

In other parts of the garden *E. cinerea* 'Domino', *E x darleyensis* 'Silberschmelze', *Calluna* 'Joan Sparkes' and 'Ralph Purnell' died as a result of the drought.



Some random notes

G. A. and R. G. Chatelain, Orpington, Kent

Although it was pleasant to be invited by the Editor to provide a note about any new cultivars we had come across recently, his letter came at a time of inactivity on our part, most of the summer of 1976 having been spent trying to save existing plants from the drought and other factors in 1977 having prevented us from undertaking much 'heathering'. Nevertheless, a few jottings may be of interest.

Our nearest specialist nursery is Hardwicks, which we often visit with the intention of looking, but usually return home with something new. About three years ago we saw a somewhat scruffy looking *E. erigena* with distinctive off-white flowers. It was labelled 'Ivory' which exactly described the flower colour. Mr. Baulu tells us that the plant was an introduction by Mr. Hardwick but that it is no longer in cultivation. We hope to rectify this omission as the plant is indeed a pleasant addition

to the *erigena* range being covered in bloom very different from the usual white forms and contrasting well with the coloured varieties. Also from Hardwicks comes a *Daboecia* with golden variegated foliage. This is 'William Buchanan Gold' and although Mr Baulu has been showing it for several years, for some reason it does not appear to have been included in the literature, although this may have been corrected by the time these notes appear*. Another addition to the garden from this nursery is *E. cinerea* 'White Dale' which we first saw growing so well in Major-Gen. Turpin's garden. Its long sprays of profusely borne flowers make this a useful addition to the list of white cinereas.

It is seldom that we visit Mr. Davis' sylvan retreat without returning with something exciting. The latest addition is *E. cinerea* 'Ashgarth Garnet', a plant which will be familiar to those members who attended the Farnham conference. Of the same colour group as 'Velvet Night' and 'Katinka', so aptly described by Mr. Yates as glowing beetroot, our plants are more compact and have bloomed without interruption for a good three months. C.v. 'Anthony Davis' is another introduction of Mr. Davis which blooms well but which, with us at least, tends to yellow at the base after some five years. It is a cultivar we have yet to meet anywhere else in this country although it is now listed by Zwijnenburg of Boskoop, and Herr Westermann in Germany has a sizeable stock from the few plants we gave him in 1974. It is surprising that 'Anthony Davis' is not grown more in this country. If it will soon be superseded by newcomers such as 'Silver King' and 'Beoley Silver', it will be a shame. Zwijnenburg lists a number of plants unfamiliar to us but one, *E. cinerea* 'Providence' we are determined to get our hands on, having seen it growing in Boskoop. Of a deep fiery red colour, it is quite different from any other cultivar of our acquaintance. Mr. Brien in Pitcairngreen has a number of plants and a trip to Scotland seems indicated. His is a nursey we visit with the highest expectations due to the number of surprises to be founded dotted around

*See *R.H.S. Journal* for March, 1978.

his beds. This year we have acquired several *Callunas*: 'Salmon Leap', 'Christina', 'Jan Dekker' and 'Highland Rose'. It is of course too early to say how they will flourish, but if they are only half as attractive as 'Arran Gold' or his St. Kilda heathers, we shall be well satisfied.

Plants which have not done well with us are *C.v.* 'St Nick' which is reputed to bloom on St Nicholas Day but resolutely refuses to do so with us, and *E. cinerea* 'Apricot Charm' which turns up its toes and dies with us. A further disappointment is that *C.v.* 'Joseph's Coat', brought back from a visit to Mr. Osmond at Wickwar, has refused to produce other than white flowers and we gather that its early erratic behaviour has not been repeated. *C.v.* 'Wickwar Flame' does not appear to deteriorate with age and it was pleasant to see it catalogued by a local garden centre.

The above has turned out to be a list of nurseries visited with one major and glaring exception. A visit to Tabramhill is an experience not readily forgotten and our omission of it from our travels is something we are determined to put right as soon as possible. When we do, no doubt the visit will provide material for any future article our Editor may request – if in fact he does not feel that the present effort is quite enough of a good thing!



Heather Gardens No. 4 ***The Royal Botanic Gardens,*** ***Kew***

Major-General P. G. Turpin, Guildford

Londoners are lucky in the number of public parks and gardens within easy reach, in which they can enjoy the superb collections of trees, shrubs and flowers bequeathed to them by a succession of dedicated botanists and horticulturists over the years. No other Capital can boast so many gardens, which receive such constant care and attention from experts in the techniques of

horticulture. Pre-eminent are the Royal Botanic Gardens at Kew, which can well claim to be the most important botanical institution in the world. For more than two hundred years its Directors and Staff have collected, grown, classified and preserved millions of plants. And here the heather enthusiast will find a corner of the Gardens devoted entirely to his special interest.

The Heath Garden lies in the extreme south-east corner near the Pagoda and is only a short distance from the Lion Gate entrance in Kew Road. The site was occupied by roses until 1956, when it was decided to create a heath garden with a representative collection of heathers. The original planting consisted of some twenty thousand plants, which included most of the species and hybrids in cultivation outdoors in this country.

The garden is skilfully landscaped to form a series of large island beds rising towards their centres, with grass paths winding along their lower edges, so that the plants can be seen to their best advantage. The beds, some of them fifty feet wide, are large enough to permit very generous plantings of the different varieties.

The soil at Kew is a sandy loam which dries out quickly. The beds in the Heath garden are enriched with a generous supply of leaf-mould and given a surface mulch of peat to help retain moisture and keep down the weeds. Little artificial watering took place during the summer of 1976, and there were some losses from the drought, which are now being made good. As there are five main planting areas, it is convenient to follow a five year replanting cycle in order to keep the collection in a young and vigorous condition. The plantings have been made with the object of giving a colourful display at the two main flowering periods: late winter and spring for the tree heaths, and the varieties of *E. carnea*, *Erica erigena* and the darleyensis hybrids; and late summer and autumn for the summer-flowering species. Full use is made of cultivars with coloured foliage to provide contrast at both seasons. The educational value of this collection of heathers is not lost sight of and the garden

has its place in the curricula of students attending courses at Kew.

In mid-April 1977, when most of the *E. carnea* varieties were still at their best, the garden looked very impressive, with the Pagoda in the background, *E. arborea* 'Alpina', *E. lusitanica* and *E. australis* giving height to the display, and *E. erigena* 'Coccinea', 'Alba' and 'W. T. Rackliff' framing the lower-growing *E. x darleyensis* 'George Rendall', 'Silberschmelze' and 'Arthur Johnson', and the *E. carnea* cultivars 'Winter Beauty', 'Praecox Rubra', 'Springwood White' and 'Springwood Pink' lining the grass paths. The splendour of this display again brought home firmly the lesson that a comparatively small number of well-chosen varieties can make a far more spectacular effect than smaller groups of many more cultivars. Here no group consists of less than a hundred plants and most number between four and five hundred.

Of the summer-flowering heathers the Callunas are the most numerous, with a dozen or so of the best, well-tried, varieties, including *Calluna* 'H. E. Beale', 'Tib', 'Cuprea', 'Alba Flore Pleno', 'Co. Wicklow', 'Mullion', 'Ruth Sparkes', 'Hirsuta Typica', 'Serlei', 'Multicolor', 'MacGregor's Variety' and "Elegantissima". This last is not the true Walter Ingwersen variety, but possibly a seedling from it. All these are planted in bold groups which are most effective. *E. cinerea* is represented by the cultivars 'Rosea', 'C. D. Eason' and 'Apple Blossom'. There is a good selection of *E. vagans*: 'Mrs. D. F. Maxwell', 'Diana Hornibrook', 'Lyonesse', 'St. Keverne', 'Kevernensis Alba' and 'Pyrenees Pink'. One unusual grouping consists of an interplanting of *E. vagans* 'Pyrenees Pink' and the white *Calluna* 'MacGregor's Variety', a strong-growing cultivar similar to 'Serlei' and flowering at about the same time.

Daboecia cantabrica, *E. mackaiana* 'Plena', *E. ciliaris* 'Maweana' and the *E. x williamsii* and *E. x watsonii* hybrids make colourful patches in September, and the grey foliage of *E. tetralix* 'Alba Mollis' is at all times a splendid contrast to the various shades of green and golden foliage.

Background and variety are provided by specimen trees and shrubs. There is a fine Blue Cedar, Acacias and varieties of Silver Birch; and low-growing Junipers and *Gaultheria shallon*.

The gardens are open all the year round and a visit at any time is most rewarding.

Mr. Charles Erskine, the Assistant Curator, Arboretum, has been responsible for this part of the Gardens since March 1977, when he succeeded Mr. G. E. Brown; with Mr. Jim Mateer, the Garden Supervisor of the Heath Garden, he ensures that the heathers are a constant attraction to visitors.



Erica ciliaris, and *Erica x Watsonii* in Dorset.

A. W. Jones, West Camel, Somerset

Erica ciliaris is found in Tangier, north-western Morocco and in the coastal regions of continental Europe as far north as Brittany. In the British Isles it is indigenous to Cornwall, Devon (though now perhaps only to a single site), Dorset and Western Ireland. It is one of our scarcest native heaths, but is most abundant in Dorset. Even here it is restricted to an area in the south east of the County lying between Poole Harbour and the Purbeck Hills, with a few isolated stands north-west of Wareham.

Some of the heathlands and valley bogs here where the plants grow are controlled by the National Environment Research Council and are not open to the public. The Council's Institute of Terrestrial Ecology has a base at the Furzebrook Research Station near Wareham. A letter to Furzebrook brought us permission to visit the heaths, and so it was on an afternoon in early October we met Dr. S. B. Chapman who has made a special study at Furzebrook of *E. ciliaris* and its hybrids with *E. tetralix*.

Before showing us the plant in the wild, Dr. Chapman gave us a short talk. He showed a large scale map of the distribution of the plant in Dorset and told us that there has been little change in the population since the

mid-1930's. He then went into the question of the hybrids between *E. ciliaris* and *E. tetralix* and explained how he used a nine point table of morphological differences to place plants in the categories *ciliaris*, *tetralix*, or hybrid. The features are:

E. ciliaris

1. Leaves broadly ovate (only twice as long as broad)
2. Midrib glabrous
3. Branches short and numerous tending to be whorled under the current inflorescence
4. Inflorescence a unilateral raceme.
5. Leaves three to a whorl.
6. Corolla tubular-urceolate, 8-10 mm long, ventricose, mouth oblique.
7. Anthers without appendages.
8. Anther surface papillate.
9. Capsule glabrous.

E. tetralix

- Leaves linear-lanceolate. (At least three times longer than broad)
- Midrib pubescent.
- Branches long and sparse, usually some distance from current inflorescence.
- Inflorescence an umbel.
- More than three leaves to a whorl.
- Corolla ovoid-urceolate, 6-8mm long, not ventricose, mouth may be slightly oblique.
- Anthers with appendages more than half the length of the anther.
- Anther surface not papillate.
- Capsule pubescent.

The presence or absence of anther appendages is probably the most reliable single characteristic in distinguishing between *E. ciliaris* and *E. tetralix*. Many plants were examined and given a score of 0 for a *ciliaris* characteristic and 1 for a *tetralix* characteristic. The scores of individual plants were then totalled and a score of less than three was said to be *ciliaris*, from three to six *tetralix* hybrid, and greater than six *tetralix*. When a histogram of the individual scores was plotted a trimodal distribution was revealed with well defined peaks at 0 and 9 and a spectral hump peaking between 4 and 5.

E. ciliaris may be found on dry sites and is usually where the soil has been disturbed in the fairly recent past. This latter point may be the clue to the larger number of viable *ciliaris* seeds than hybrid seeds. There is also a statistical correlation between *ciliaris* and tall vegetation such as *Molinia* and *Phragmites*. Wet heathland sites with up to 10cms of peat can only be colonised after disturbance by burning and so remain fairly stable in population, whereas growing sphagnum presents a

constantly regenerating germination site: and under these conditions once *ciliaris* has become established it develops fairly rapidly from a mixed population dominated by *tetralix* to a mixed population dominated by hybrids. The main sites for hybrid plants are near the centre of the area where *E. ciliaris* grows, and Dr. Chapman explained that this was supported by the hypothesis that *E. ciliaris* in Dorset represents an expanding population.

After this talk Dr. Chapman took us to a site on Hartland Moor, which had been burned during the Summer of 1976, and seemed to have a fairly shallow depth of (sandy) peat. Here the pure *E. ciliaris* was re-establishing itself together with Marsh Gentians (*Gentiana pneumonanthe*). The *ciliaris* were perhaps six inches tall here.

The next site we visited was on common land, not far from the first. This had not been burned for a number of years and contained a large population of hybrid plants. These were large and dome-shaped being between one and a half feet tall. The site seemed reasonably dry, but this may have been as a result of drainage carried out since they became established. Indeed a roadside drainage ditch provided an excellent example of one of the points Dr. Chapman had made in his talk, as pure *E. ciliaris* was growing on its banks. These plants were smaller than those that some of us saw on Dartmoor during the 1973 Conference at Dartington Hall. However they were not growing in competition with the Forestry Commission's conifers. Dr. Chapman said that *E. ciliaris* was present in some sites in Dorset where afforestation had taken place, but during our four hour visit we did not have time to see them.

Finally, Dr. Chapman took us to a site where there had been a stand of white *E. ciliaris* prior to severe burning in 1976. He was unable to say if it was still present and we had a long tramp across the bog to reach the place. All landmarks had been obliterated by the fire, and when we arrived at the supposed site we found nothing. However on crossing a low ridge and descending to the next valley, still in an area devastated

by fire, we were rewarded by finding a number of small white flowered plants. I am ashamed to say that my delight at seeing these plants drove scientific curiosity from my mind and I cannot say for certain if they were seedlings or plants growing from rootstocks which had survived the fire.

It had been a fascinating afternoon and I am delighted to report that *E. ciliaris* and its hybrids are still relatively abundant and that where the stocks were decimated by fire, they are recovering.

*The subject matter of Dr. Chapman's talk is fully covered in his paper, "The Distribution and Composition of Hybrid Populations of *Erica ciliaris* L. and *Erica tetralix* L in Dorset". J. Ecol 63, 809-823, November 1975, referred to in Recent Writings in the 1977 Year Book.



Pulverised Bark

A. J. Stow, Flackwell Heath, Bucks.

I was introduced to this product in the spring of 1977 and carried out the supplier's instructions by mulching a heather bed to a depth of one inch. The rest of the heather garden was mulched with my normal dressing of leaf mould, an annual necessary operation as the pH of my soil is 7.6. Initially, due to a lengthy dry spell, it was not an instant success as the bark, being very light, tended to be blown about and was very popular with the birds, who seemed to delight in scratching in the mulch.

However, after a period of rain the bark consolidated itself on to the surface, completely obliterating all weeds. Even during subsequent dry periods the birds did not find it so attractive, as the bark had formed a firm and solid carpet, though it still remained pervious to rain.

As an experiment I also used some of the medium for rooting cuttings, these were quite successful, but no advantage to my mind was gained over the standard peat and sand mixture. Pulverised bark is more coarse than sedge peat, in fact rather like sphagnum peat, and for propagating purposes needs to be broken down and finely sieved before adding the sand. However

specially prepared bark-based composts are now available, and obviously this would eliminate the sieving process.

Mr. O. J. Clayton, writing from Wisley, says that for mulching he prefers it in the form of chippings, which they obtain direct from the Forestry Commission. The larger particles, up to half an inch or more in diameter, last longer and are particularly suitable as a surface mulch for heathers and dwarf conifers.

To sum up, the advantages over peat appear to be twofold – *one*, after six months the bark is still intact on the surface and weeds are non-existent and *two*, a not inconsiderable advantage, is that pulverised bark is cheaper and from my brief experience it seems likely to stay on the surface for at least two years. The suppliers add that as a soil conditioner it has a useful life of up to five years.

Book Review

LES BRUYERES DE PLEIN AIR

by Léon Goarant. Obtainable from him at 182 Rue du Fauborg St Denis, 75010 Paris, for 15 francs plus postage.

M. Goarant is the proprietor of Les Plantations Modernes “le bureau d’approvisionnement qui solutionne les fournitures de toutes les plantes” and I suppose his booklet, of 65 large pages, is in one way an unpriced catalogue. But for all that he is to be congratulated on producing the first book in French almost entirely on hardy heathers. He lists some 360 cvs but, such is the state of French Philericism, that only about 100 are noted as “Les plus couramment commercialisées”. He clearly has used the Dutch lists, but there is good evidence of personal knowledge.

The introduction is suitable and includes a map showing the number of days of frost in different areas, and the heathers are allotted to these five groups; but I think he underrates their hardiness. Following the annotated list, which is by species and flower colour, is an extensive calendar of flowering times, and then the cvs listed yet again by colour of their foliage. The production ends with eight pages on associated plants. There are elegant line drawings throughout. Errors there are, but this cheaply produced (yet somewhat expensive) work should at least start to reduce the “peu d’intérêt porté jusqu’alors aux Bruyères de Plein Air en France”. The next step must be a colourful hard-back.

D. McC.

- MANTILLO J. L. G., ARMIN J. & VIEITAZ E. Actividad biologica sobre el crecimiento y germinacion de extracta de *Calluna vulgaris* (L.) Hull. *Anales de Edefologia y Agriobiologia* 34 (9-10) 789-95.
 Extracts of *Calluna* showed significant inhibitory effects on seed germination.
- MANTILLO J. L. G. & VIEITAZ E. Compuestos fenolicos en extractos de *Calluna vulgaris* (L.) Hull. *ibid.* 34 765-74.
 Phenolic compounds in the leaves, flowers, stems and roots determined.
- PATTERSON A. A wealth of March Heathers. *Amateur Gardening* 5 March 1977 12-13.
 A racy romp.
- PERRY F. Heather bright. *Observer* 9 Oct. 1977.
- PIZZETTI I. & COCKER H. "Flowers, A guide to your garden." Henry N. Abrams Incl. *Calluna* pp. 153-6, *Erica* 441-51.
 Good only in parts.
- READ D. J. & STRIBLING D. P. Some mycological aspects of the biology of mycorrhiza in the Ericaceae. In "Endomycorrhizas", ed. F. E. Saunders et al. *Academic Press* 1975 pp. 105-117.
- STRIBLING D. P. & READ D. J. Some nutritional aspects of the biology of Ericaceous mycorrhizas. *ibid.* pp. 195-207.
- WHITEHEAD G. E. Of Heaths and Heathers. *W. Sussex Gazette*, 27 Oct. 1977.
 Adequate general summary.
- WHITSEY F. Keeping heather at home. *Daily Telegraph* 9 Oct. 1977.
 "I cannot take them to my heart" but . . .



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Recent writings on Heathers, 1977

- ANON. Erica-woche von 3 bis 8 Oktober 1977. *Gärtnerzeitung* 39/77 p. 708.
A coordinated effort by Swiss nurserymen to show how fine heathers can be.
- ANON. Hochstamm Eriken. *Gärtnerbörse & Gartenwelt* 77(44) 1058.
An account of the medal-winning awards at the Stuttgart show.
- AUBERT S. Les Ericacées en Provence. Thèse, Université d'Aix, Marseille. CNRS No. A 0 1348.
Assesses the factors affecting their distribution.
- COX D. Winter-flowering Heathers, and Summer-flowering Heathers. *Garden News* 12 Feb. 1977 18-19.
Short lists with particulars, and a photo of *Erica* 'Delta'.
- CROWDEN R. K. & JARMAN S. J. Anthocyanins in the genus *Erica*. *Phytochemistry* 15(11); 796-7.
Analyses 39 species, all S African except *E* "*mediterranea*", *E* *carnea* and *E* *cinerea*, which proved to be identical except for a minute difference between the first two.
- de LA ROCHEFOUCAULD B. *Erica darleyensis* 'Margaret Porter'. *L'Ami des Jardins* Nov. 1976.
A useful introduction to the merits of the winter-flowerers.
- EZRA D. Sir John Charrington. *The Times* 23 July 1977.
His 'leadership in the coal trade'.
- HAHN E. *Andromeda* ein Kleingeholz des immergrünen Gartens. *Palmengarten* 41 63.
A short account.
- HARPER P., Hardy Heaths and Heathers. *Avant Gardener*. 9 (6) 41-48. Full of facts from across the Atlantic, by an old and knowledgeable friend.
- JAVORKA S. & CSAPODY V. *Iconographia Florae partis austro-orientalis Europae centralis*. p. 389.
Drawings of *Calluna*, *E carnea* and *Bruckenthalia*.
- LECOINTE A. L. & PROVOST R. A propos d'une "transplante de sauvegarde" d'*Andromeda polifolia* . . . de Baupré (Manche) a Cessières (Aisne). *Bull. Soc. Linn. de Normandie* 105 95-9.
- LE CROIX I. F. Heaths for the garden. *Green Fingers* Vol. 5 Pt. 54 33-8.
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